

- 1) Align long reads against the pre-assembled contigs (or scaffolds)
  - # Align each long read against the pre-assembled contigs with BLASR
  - # Extend each local alignment to full contig size
  - # Iteratively remove contigs with (partial) overlap to contig with higher alignment score
- 2) Compute contig linkage from alignment order
  - # Sort contig order based on alignment positions on long reads
  - # Calculate the inter-contig distance and orientation
  - # Store contig-pairing and multi-contig linkage
  - # Retain preferred pairings based on majority voting
  - # Solve ambiguous pairings using multi-contig linkage information
  - # Flag remaining ambiguous pairings as repeats
- 3) Scaffold contigs
  - # Connect linear contig links
  - # Place repeated elements based on multi-contig linkage information
  - # Attempt to further connect linear links using multi-contig linkage information
  - # Finished genome
  - # Calculate gap-size and eventually merge contigs (if negative gap-size)
  - # Search for possible circularization